



\*\*FILE\*\*ID\*\*FORREADIF

C 2

(2)	56	HISTORY : Detailed Current Edit History
(3)	86	DECLARATIONS
(4)	130	FOR\$READ_IF - READ INTERNAL formatted

```
0000 1 .TITLE FOR$READ_IF - entry point for FORTRAN READ INTERNAL FORMATTED
0000 2 .IDENT /1-012/ File: FORREADIF.MAR Edit: JAW1012
0000 3 :
0000 4 ****
0000 5 :*
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0000 23 :*
0000 24 :*
0000 25 ****
0000 26 :
0000 27 :
0000 28 :++
0000 29 :FACILITY: FORTRAN Support Library - user callable
0000 30 :
0000 31 :ABSTRACT:
0000 32 :
0000 33 : This module contains the entry point for the FORTRAN
0000 34 : READ INTERNAL FORMATTED I/O statement. It is simply
0000 35 : a call to FOR$IO_BEG with bits in R0 which describe the
0000 36 : parameter list. FOR$IO_BEG interprets the parameters.
0000 37 :
0000 38 :MAINTENANCE NOTE:
0000 39 : The transfer vector (RTLVECTOR+ALLGBL) must have the following:
0000 40 :
0000 41 :.TRANSFER FOR$READ_IF
0000 42 :.MASK FOR$IO_BEG
0000 43 :BRW FOR$READ_IF+2
0000 44 :
0000 45 : This puts the correct mask in entry vector, that is FOR$IO_BEG entry mask.
0000 46 : Furthermore this module must only use R0 and R1
0000 47 : since any other register might not be in the entry mask for FOR$IO_BEG.
0000 48 :
0000 49 :ENVIRONMENT: User access mode; mixture of AST level or not
0000 50 :
0000 51 :AUTHOR: Richard B. Grove, CREATION DATE: 28-May-78
0000 52 :
0000 53 :MODIFIED BY:
0000 54 : T. Hastings, 29-July-78
```

0000 56 .SBTTL HISTORY ; Detailed Current Edit History  
0000 57  
0000 58  
0000 59 : Edit History for Version 1  
0000 60  
0000 61 : 0-10 - Add comment about vectors. TNH 23-June-78  
0000 62 : 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78  
0000 63 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78  
0000 64 : 1-002 - Change statement type symbols to be LUB\$K... JBS 07-DEC-78  
0000 65 : 1-003 - Change statement type symbols to be ISB\$K... JBS 11-DEC-78  
0000 66 : 1-004 - Add , to the PSETI directive. JBS 22-DEC-78  
0000 67 : 1-005 - Add FOR\$READ\_KF, FOR\$READ\_KO, FOR\$REWRITE\_SF, FOR\$REWRITE\_SO,  
0000 68 : FOR\$READ\_IF, FOR\$READ\_IO, FOR\$WRITE\_IF, FOR\$WRITE\_IO,  
0000 69 : FOR\$READ\_KU, FOR\$REWRITE\_SU,  
0000 70 : SBL 2-May-1979  
0000 71 : 1-006 - Remove all entry points that need object time formatting,  
0000 72 : putting them in FORSENTRY\_OBJ so that we can arrange to  
0000 73 : load the format compiler only when it is needed.  
0000 74 : JBS 26-JUN-1979  
0000 75 : 1-007 - Remove entry point FOR\$ENCODE\_MF; we will code a new module  
0000 76 : for it and FOR\$IO\_BEG, to see how much I/O initiation time  
0000 77 : improves. JBS 02-JUL-1979  
0000 78 : 1-008 - Do likewise for FOR\$READ\_DU and FOR\$WRITE\_DU. JBS 03-JUL-1979  
0000 79 : 1-009 - Remove all entry points except FOR\$READ\_IF; each of the  
0000 80 : others gets its own module so we can selectively load  
0000 81 : the necessary UDF and REC modules. JBS 09-JUL-1979  
0000 82 : 1-010 - Correct a typo that caused a data truncation error. JBS 10-JUL-1979  
0000 83 : 1-011 - New parameter format for FOR\$IO\_BEG. SBL 5-Dec-1979  
0000 84 : 1-012 - Change BRW FOR\$IO\_BEG+2 to JMP G^FOR\$IO\_BEG+2. JAW 21-Feb-1981

```
0000 86      .SBttl  DECLARATIONS
0000 87
0000 88
0000 89 ; INCLUDE FILES:
0000 90 ;
0000 91
0000 92     $FORPAR          ; Define inter-module FORTRAN symbols
0000 93     $ISBDEF          ; Define statement type symbols
0000 94
0000 95 ; EXTERNAL SYMBOLS:
0000 96
0000 97 ;
0000 98
0000 99     .DSABL  GBL          ; Declare all external symbols
0000 100    .EXTRN  FOR$SIO_BEG    ; common I/O statement processing
0000 101    ;+
0000 102    ; The following references are to make sure the necessary UDF and REC
0000 103    ; modules are loaded. These are the routines which are called through
0000 104    ; the dispatch tables in FOR$$DISPAT.
0000 105    ;-
0000 106    .EXTRN  FOR$SUDF_RF0, FOR$SUDF_RF1, FOR$SUDF_RF9
0000 107    .EXTRN  FOR$REC_RIF0, FOR$REC_RIF1, FOR$REC_RIF9
0000 108
0000 109 ; MACROS:
0000 110
0000 111    ; NONE
0000 112
0000 113 ; PSECT DECLARATIONS:
0000 114
0000 115
0000 116
00000000 117     .PSECT  _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 118
0000 119 ; EQUATED SYMBOLS:
0000 120
0000 121
0000 122
0000 123
0000 124
0000 125 ; OWN STORAGE:
0000 126
0000 127 ; NONE
0000 128
```

0000 130 .SBTTL FOR\$READ\_IF - READ INTERNAL formatted  
0000 131  
0000 132 :++  
0000 133 : FUNCTIONAL DESCRIPTION:  
0000 134  
0000 135 Initialize the FORTRAN I/O system to perform  
0000 136 a READ INTERNAL formatted I/O statement.  
0000 137  
0000 138 : CALLING SEQUENCE:  
0000 139  
0000 140 CALL FOR\$READ\_IF (user\_vbl.rt.dx, format\_adr.mbu.ra  
0000 141 [, err\_adr.j.r [, end\_adr.j.r]])  
0000 142  
0000 143 : INPUT PARAMETERS:  
0000 144  
0000 145 user\_vbl.rt.dx User's string variable  
0000 146 format\_adr.mbu.ra adr. of compiled format byte array  
0000 147 [err\_adr.j.r] optional ERR= address  
0000 148 [end\_adr.j.r] optional END= address  
0000 149  
0000 150 : IMPLICIT INPUTS:  
0000 151  
0000 152 NONE except those used by FOR\$IO\_BEG.  
0000 153  
0000 154 : OUTPUT PARAMETERS:  
0000 155  
0000 156  
0000 157  
0000 158 : IMPLICIT OUTPUTS:  
0000 159  
0000 160 NONE except those left by FOR\$IO\_BEG.  
0000 161  
0000 162 : COMPLETION CODES:  
0000 163  
0000 164  
0000 165  
0000 166 : SIDE EFFECTS:  
0000 167  
0000 168 NONE except those of FOR\$IO\_BEG.  
0000 169  
0000 170 :--  
0000 171  
0000 172 FOR\$READ\_IF:: .MASK FOR\$IO\_BEG  
0000 173 MOVZBL #ISBK ST TY R1F, R0 : Statement type  
0000 174 JMP G^FOR\$IO\_BEG+2 : branch past call mask  
0008 175  
0008 176  
0008 177 .END

50 12 9A 0002  
00000002'GF 17 00050000' 0000  
0008  
0008  
0008

FOR\$READ\_IF  
Symbol table

1 2  
- entry point for FORTRAN READ INTERNAL 15-SEP-1984 23:56:34 VAX/VMS Macro V04-00  
6-SEP-1984 10:59:03 [FORRTL.SRC]FORREADIF.MAR;1 Page 5 (4)

FOR\$SIO\_BEG  
FOR\$REC\_RIF0  
FOR\$REC\_RIF1  
FOR\$REC\_RIF9  
FOR\$UDF\_RFO  
FOR\$UDF\_RF1  
FOR\$UDF\_RF9  
FOR\$READ\_IF  
ISBK\_ST\_TY\_RIF

\*\*\*\*\* X 00  
00000000 RG 01  
= 00000012

+-----+  
! Psect synopsis !  
+-----+

PSECT name

PSECT name	Allocation	PSECT No.	Attributes	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
. ABS	00000000	( 0.)	00 ( 0.)	NOPIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT
_FORSCODE	00000008	( 11.)	01 ( 1.)	PIC	USR	CON		LCL				NOVEC LONG

+-----+  
! Performance indicators !  
+-----+

Phase

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.07	00:00:00.97
Command processing	110	00:00:00.61	00:00:03.61
Pass 1	125	00:00:01.19	00:00:04.05
Symbol table sort	0	00:00:00.19	00:00:00.27
Pass 2	46	00:00:00.46	00:00:01.70
Symbol table output	3	00:00:00.02	00:00:00.09
Psect synopsis output	2	00:00:00.01	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	317	00:00:02.57	00:00:10.71

The working set limit was 1050 pages.

6676 bytes (14 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.

177 source lines were read in Pass 1, producing 8 object records in Pass 2.

9 pages of virtual memory were used to define 2 macros.

Macro library name

\$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB;1  
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2  
TOTALS (all libraries)

Macros defined

2  
0  
2

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:\$FORREADIF/OBJ=OBJ\$:\$FORREADIF MSRC\$:\$FORREADIF/UPDATE=(ENH\$:\$FORREADIF)+LI

0183 AH-BT13A-SE  
VAX/VMS V4.0

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LIS

FORREWSU  
LIS

FORREADKO  
LIS

FORREWIND  
LIS

FORSIGNAL  
LIS

FORREADSF  
LIS

FORREWSO  
LIS

FORREADSN  
LIS

FORSECONDS  
LIS

FORREADOU  
LIS

FORREADSU  
LIS

FORREADIL  
LIS

FORREADKF  
LIS

FORREWSF  
LIS

FORREADKU  
LIS

FORREADSL  
LIS FORREADSO  
LIS